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Multiple human diseases involving chronic oxidative stress show a significant sex bias, including neurodegenerative diseases.
Paraquat (PQ), an oxidative stress inducing substance, is a herbicide which is very toxic to the animals and humans. A number of studies have shown that PQ is a potent neurotoxin.
Paraquat (PQ) is a dopaminergic neurotoxin and a well-known pneumotoxicant that exerts its toxic effect via oxidative stress.
Parkinson's disease (PD) is a neurodegenerative disease in which the etiology of 90 percent of the patients is unknown. PD is characterized by the loss of dopaminergic neurons in the substantia nigra.
Microdialysis was used to administer paraquat into the spinal cord of the anesthetized rat to determine the effects of the herbicide on the substantia nigra.
We demonstrate that injections of 1-methyl-4-phenyl-1,2,3,6-tetra-hydropyridine (MPTP), 1-methyl-4-phenyl-pyridinium (MPP ⁺), and paraquat (PQ) into the substantia nigra of the male Wistar rats produce a similar pattern of neurotoxicity.
We have recently reported that environmental toxicants, such as DDT, PCBs, pyrethroids, and nicotine can induce permanent changes in the substantia nigra of the male Wistar rats.
Effects of paraquat on the substantia nigra of the male Wistar rats were studied pharmacologically by an intracerebral injection of paraquat (PQ) into the substantia nigra.
We have examined whether the widely used herbicide, paraquat (1,1'-dimethyl-4,4'-dipyridylium) may accumulate in rat brain and whether it can induce neurotoxicity.
Cases of familial amyotrophic lateral sclerosis (fALS; a neurodegenerative disorder) have been reported in which the gene for the disease is linked to the 21st chromosome.
The herbicide paraquat, bearing structural similarity to the known dopaminergic neurotoxicant MPTP, has been suggested as a risk factor for Parkinson's disease (PD).
The absence of any compelling basis for a heritable basis of idiopathic Parkinson's disease (PD) has focused attention on environmental factors as potential risk factors for the disease.
Experimental evidence supporting 1,1'-dimethyl-4,4'-bipyridinium [paraquat (PQ)] as a risk factor for Parkinson's disease is reviewed.
(-)-Deprenyl (DEP) had been shown to slow the progression of Parkinson's disease (PD). The present study sought to determine whether DEP could also protect against the neurotoxicity of paraquat.
Idiopathic Parkinson's disease (PD) is associated with advanced age, but it is still unclear whether dopaminergic neuronal loss is the primary event in the pathogenesis of the disease.
Herbicides, including paraquat, may produce neurodegenerative effects when given both peripherally and into the brain through the olfactory bulb.
While advancing age is the only unequivocally accepted risk factor for idiopathic Parkinson's disease, it has been postulated that environmental factors may also play a role in the pathogenesis of the disease.
Triadimefon (TDF), a triazole fungicide, and paraquat (PQ), a non-selective herbicide/dessicant, are both known to adversely affect the growth and development of the rat.
Alterations of motor behavioral patterns and monoamine contents in the discrete rat brain areas after acute paraquat exposure were studied.

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A lack of strong evidence for genetic heritability of idiopathic Parkinson's disease (PD) has focused attention on environmental factors.
BACKGROUND: Paraquat (PQ; 1, 1'-dimethyl-4, 4'-bipyridinium), a widely used herbicide that is structurally similar to the pyridine ring, is a potent neurotoxin.
The aim of the present study was to examine the influence of the long-term paraquat administration on the dopaminergic system.
Although the etiology of Parkinson's disease (PD) is not fully understood, there are numerous studies that have linked the disease to environmental factors.
The vulnerability of different dopaminergic cell populations to damage caused by the herbicide paraquat was assessed by immunohistochemical analysis.
Epidemiological studies indicate that smoking is a negative, and exposure to pesticides, a positive risk factor for Parkinson's disease.
Catastrophic loss of dopaminergic neurons is a hallmark of Parkinson's disease. Despite the recent identification of genes associated with the disease, the underlying mechanisms remain unclear.
Paraquat is a toxin suggested to contribute to pathogenesis of Parkinson's disease. The aim of the present study was to evaluate the effects of paraquat on dopaminergic neurons.
Parkinson's disease (PD) may be caused by a complex interaction of environmental insults and genetic susceptibilities. Previous studies have shown that exposure to pesticides is a risk factor for PD.
Genetic variability in the alpha-synuclein gene and long-term exposure to the pesticide paraquat constitute possible risk factors for Parkinson's disease.
Epidemiological studies suggest that some pesticides might constitute a risk factor for Parkinson's disease (PD). However, the underlying mechanisms remain unclear.
Activation of microglia along with the release of inflammatory cytokines and oxidative factors often accompanies toxin-induced neurodegeneration.
Parkinson's disease and other motor disorders of midbrain basal ganglia dopaminergic functioning are often characterized by neuroinflammation.
OBJECTIVE: To examine the neuroprotective effects of a novel manganese porphyrin, manganese (III) meso-tetrakis (N,N-dimethyl-2,6-pyridinediyl)porphyrin (Mn-TMP).
Inhibition of mitochondrial complex I is one of the leading hypotheses for dopaminergic neuron death associated with Parkinson's disease.
Paraquat (PQ) is a potential human neurotoxicant and is used in models of oxidative stress. We determined the toxicokinetics of paraquat in mice.
The herbicide paraquat (PQ) is a strong redox agent that participates in the formation of reactive oxygen species (ROS) and is a potent neurotoxin.
BACKGROUND: Parkinson's disease, for which currently there is no cure, develops as a result of progressive loss of dopaminergic neurons.
In addition to nigrostriatal pathology and corresponding motor disturbances, Parkinson's disease (PD) is often characterized by neuroinflammation.
BACKGROUND: Paraquat (PQ; 1,1'-dimethyl-4,4'-bipyridinium), a widely used herbicide, has been repeatedly suggested as a risk factor for Parkinson's disease.

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Parkinson's disease is a slowly progressing disease, due to a lesion of dopaminergic neurons in the substantia nigra and a
Paraquat (PQ) is a strong redox agent that contributes to the formation of reactive oxygen species (ROS) and induces toxic
Dopamine is cytotoxic and may play a role in the development of Parkinson's disease. However, its interaction with environmental
Oxidative stress is implicated in Parkinson's disease (PD). Metallothioneins (MT), cytochrome P450 IIE1 (CYP2E1) and glutathione
Paraquat is a highly toxic quaternary nitrogen herbicide capable of increasing superoxide anion production. The aim of this study
Accumulating evidence implicates pesticides such as paraquat in the development of Parkinson's disease (PD). Indeed, paraquat
Environmental exposure, genetic modification, and aging are considered risky for Parkinson's disease (PD). How these risk factors
BACKGROUND: Paraquat (1, 1-dimethyl-4, 4-bipyridium dichloride; PQ) causes neurotoxicity, especially dopaminergic neurotoxicity
An association between excessive zinc (Zn) accumulation in brain and incidences of Parkinson's disease (PD) has been shown
BACKGROUND: Parkinson's disease (PD) has been linked with exposure to a variety of environmental and immunological factors
The use of the herbicide paraquat (1,1'-dimethyl-4,4'-bipyridylium dichloride; PQ) which is widely used in agriculture is known to
Parkinson's disease (PD) is a neurodegenerative disease which causes rigidity, resting tremor and postural instability. Treatment
Parkinson's disease (PD) is classically characterized by motor symptoms; however, non-motor symptoms (NMS) are increasingly
Several investigations have reported that mice administered paraquat dichloride (PQ.Cl2) by intraperitoneal injection exhibit
The olfactory bulb (OB) is one of the first brain regions in Parkinson's disease (PD) to contain alpha-synuclein (alpha-syn)
Chronic exposure to paraquat (Pq), a toxic herbicide, can result in Parkinsonian symptoms. This study evaluated the effects of
Parkinson's disease (PD) is a prevalent and devastating neurodegenerative disorder having limited cure options and strong
Selective degeneration of dopaminergic neurons in the substantia nigra underlies the basic motor impairments of Parkinson's
Exposure to environmental toxins such as pesticides is implicated in increasing Alzheimer's disease risk. In this study, we
Epidemiological studies indicate exposures to the herbicide paraquat (PQ) and fungicide maneb (MB) are associated with

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